

**EXPRESS MAIL NO. EV 913 329 700 US**



**UNITED STATES PATENT AND TRADEMARK OFFICE**

Zeligs.

Confirmation No.: 8529

Applicant: 10/774,324

Art Unit: 1617

February 6, 2004

Examiner: Wang, Shengjun

COMBINED USE OF CRUCIFEROUS  
MOLES AND CHELATORS FOR THE  
TREATMENT OF PAPILLOMAVIRUS-  
RELATED CONDITIONS

Attorney Docket No.: 9439-013-999

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. § 1.56 AND § 1.97**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the continuing duty of disclosure imposed by 37 C.F.R. § 1.56 and § 1.97 to inform the Patent and Trademark Office of all references coming to the attention of each individual associated with the filing or prosecution of the subject application, which are or may be material to the patentability of any claim of the application, Attorneys for Applicants hereby direct the Examiner's attention to references A01-A13, B01 and C01-C26 which are listed on the attached List of References Cited by Applicant. Pursuant to 37 C.F.R. § 1.98(a)(2)(ii), copies of the cited U.S. patents and published U.S. application (i.e., references A01-A13) are not submitted herewith. Copies of references B01 and C01-C26 are submitted herewith.

Identification of the listed references is not to be construed an admission of Applicants or Attorneys for Applicants that such references are available as "prior art" against the subject application.

Applicants respectfully request that the Examiner review the foregoing references and that the references be made of record in the file history of the application.

Pursuant to 37 C.F.R. § 1.97(b)(3), since this Information Disclosure Statement is being filed before the mailing of a first Office Action on the merits, it is believed that no fee is due in connection herewith. However, should the Patent Office determine otherwise, please charge the required fee to Jones Day Deposit Account No. 50-3013.

Respectfully submitted,

Date: August 1, 2007



Thomas E. Friebe

29,258  
(Reg. No.)

**JONES DAY**

222 E. 41<sup>st</sup> Street

New York, New York 10017

(212) 326-3939

**LIST OF REFERENCES CITED BY APPLICANT**  
(Use several sheets if necessary)

ATTY. DOCKET NO.

9439-013-999

APPLICATION NO.

10/774,324

APPLICANT

Zeligs M.

FILING DATE

February 6, 2004

ART UNIT

1617

**U.S. PATENT DOCUMENTS**

| *Examiner Initial | Document Number | Date mm/dd/yy | Name Of Patentee Or Applicant Of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear |
|-------------------|-----------------|---------------|---|---|
| A01               | 5,767,135       | 06/16/98      | Fernandez-Pol                                   |   |
| A02               | 5,948,808       | 09/07/99      | Safe  |   |
| A03               | 6,001,868       | 12/14/99      | Firestone <i>et al.</i>                         |   |
| A04               | 6,242,492       | 06/05/01      | Bergeron, Jr.                                   |   |
| A05               | 6,335,443       | 01/01/02      | Geraci <i>et al.</i>                            |   |
| A06               | 6,399,645       | 06/04/02      | Bell <i>et al.</i>                              |   |
| A07               | 6,406,706       | 06/18/02      | Haque <i>et al.</i>                             |   |
| A08               | 6,410,570       | 06/25/02      | Fernandez-Pol                                   |   |
| A09               | 6,432,926       | 08/13/02      | Howley <i>et al.</i>                            |   |
| A10               | 6,468,557       | 10/22/02      | Lezdey <i>et al.</i>                            |   |
| A11               | 2003-0096855    | 05/22/03      | Zeligs  |   |
| A12               | 2004-0013965    | 03/04/04      | Jong <i>et al.</i>                              |   |
| A13               | 2005-0063903    | 03/24/05      | Zeligs  |   |

**FOREIGN PATENT DOCUMENTS**

|     | Foreign Patent Document Country Code, Number, Kind Code (If Known) | Date mm/dd/yy | Name Of Patentee Or Applicant Of Cited Document | Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear | T |
|-----|--|---------------|---|---|---|
| B01 | WO 01/24799  | 04/12/01      | Bernstein                                       |   |   |

**NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials | (Include name of the author, title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue number(s), publisher, city and/or country where published)                        | T |
|-------------------|---|---|
| C01               | Apseloff G, Therapeutic uses of gallium nitrate: past, present, and future. Am J Ther. 1999 November;6(6):327-39.   |   |
| C02               | Bell M C, Crowley-Nowick P, Bradlow H L, Sepkovic D W, Schmidt-Grimminger D, Howell P, Mayeaux E J, Tucker A, Turbat-Herrera E A and Mathis J M, Placebo-controlled trial of indole-3-carbinol in the treatment of CIN. Gynecol Oncol. 2000 August;78(2):123-9. |   |
| C03               | Bradfield C A and Bjeldanes L F, Structure-activity relationships of dietary indoles: a proposed mechanism of action as modifiers of xenobiotic metabolism. J Toxicol Environ Health. 1987;21(3):311-23.  |   |
| C04               | Chen D Z, Qi M, Auborn K J and Carter T H, Indole-3-carbinol and diindolylmethane induce apoptosis of human cervical cancer cells and in murine HPV16-transgenic preneoplastic cervical epithelium. J Nutr. 2001 December;131(12):3294-302.                     |   |
| C05               | Chen I <i>et al.</i> , Aryl hydrocarbon receptor-mediated antiestrogenic and antitumorigenic activity of Diindolylmethane. Carcinogenesis 1998, 19(9):1631-9.   |   |

**EXAMINER**  
NYI-3994892v1**DATE CONSIDERED**

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**LIST OF REFERENCES CITED BY APPLICANT**

(Use several sheets if necessary)

ATTY. DOCKET NO.

9439-013-999

APPLICATION NO.

10/774,324

APPLICANT

Zeligs M.

FILING DATE

February 6, 2004

ART UNIT

1617

**NON PATENT LITERATURE DOCUMENTS**

| Examiner<br>Initials |     | (Include name of the author, title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue number(s), publisher, city and/or country where published)  | T |
|----------------------|-----|---|---|
|                      | C06 | Chinni S R, Li Y, Upadhyay S, Koppolu P K and Sarkar F H, Indole-3-carbinol (I3C) induced cell growth inhibition, G1 cell cycle arrest and apoptosis in prostate cancer cells. Oncogene. 2001 May 24;20(23):2927-36.  |   |
|                      | C07 | Dashwood R H, Indole-3-carbinol: anticarcinogen or tumor promoter in brassica vegetables? Chem Biol Interact. 1998 Mar 12, 110(1-2):1-5.  |   |
|                      | C08 | De Kruif Calif., Marsman J W, Venekamp J C et al., Structure elucidation of acid reaction products of indole-3-carbinol: detection in vivo and enzyme induction in vitro. Chem Biol Interact 1991; 80(3):303-15.  |   |
|                      | C09 | Fernandez-Pol J A, Klos D J and Hamilton P D, Antiviral, cytotoxic and apoptotic activities of picolinic acid on human immunodeficiency virus-1 and human herpes simplex virus-2 infected cells. Anticancer Res. 2001 November-December;21(6A):3773-6.                              |   |
|                      | C10 | Fukuchi K, Tomoyasu S, Tsuruoka N and Gomi K, Iron deprivation-induced apoptosis in HL-60 cells. FEBS Lett. 1994 Aug. 15;350(1):139-42.   |   |
|                      | C11 | Gao J and Richardson D R, The potential of iron chelators of the pyridoxal isonicotinoyl hydrazone class as effective antiproliferative agents, IV: The mechanisms involved in inhibiting cell-cycle progression. Blood. 2001 Aug. 1;98(3):842-50.                                  |   |
|                      | C12 | Gao X, Petroff B K, Oluola O, Georg G, Terranova P F and Rozman K K, Endocrine disruption by indole-3-carbinol and tamoxifen: blockage of ovulation. Toxicol Appl Pharmacol. 2002 Sep. 15;183(3):179-88.  |   |
|                      | C13 | Gillison M L and Shah K V, Human papillomavirus-associated head and neck squamous cell carcinoma: mounting evidence for an etiologic role for human papillomavirus in a subset of head and neck cancers. Curr Opin Oncol. 2001 May;13(3):183-8.                                     |   |
|                      | C14 | Harwood C A and Proby C M, Human papillomaviruses and non-melanoma skin cancer. Curr Opin Infect Dis. 2002 April;15(2):101-14.  |   |
|                      | C15 | Hasegawa M, Ohoka I, Yamazaki K, Hanami K, Sugano I, Nagao T, Asoh A, Wada N, Nagao K and Ishida Y, Expression of p21/WAF-1, status of apoptosis and p53 mutation in esophageal squamous cell carcinoma with HPV infection. Pathol Int. 2002 July;52(7):442-50.                     |   |
|                      | C16 | Hong C, Firestone G L and Bjeldanes L F, Bcl-2 family-mediated apoptotic effects of 3,3'-diindolylmethane (DIM) in human breast cancer cells. Biochem Pharmacol. 2002 Mar. 15;63(6):1085-97.  |   |
|                      | C17 | Jin L. et al., Indole-3-carbinol prevents cervical cancer in human papilloma virus type 16 (HPV16) transgenic mice, Cancer Res. 1999, 59(16):3991-7.  |   |
|                      | C18 | Marks P A, Richon V M and Rifkind R A, Histone deacetylase inhibitors: inducers of differentiation or apoptosis of transformed cells. J Natl Cancer Inst. 2000 Aug. 2; 92(15):1210-6.   |   |
|                      | C19 | Romeo A M, Christen L, Niles E G and Kosman D J, Intracellular chelation of iron by bipyridyl inhibits DNA virus replication: ribonucleotide reductase maturation as a probe of intracellular iron pools. J. Biol. Chem. 2001 Jun. 29;276(26):24301-8.                              |   |
|                      | C20 | Rosen, C.A., Woodson, G. E. et al., Preliminary results of the use of indole-3-carbinol for recurrent respiratory papillomatosis. Otolaryngology Head Neck Surgery 1998, 118:810-5.   |   |
|                      | C21 | Serth J, Panitz F, Paeslack U, Kuczyk M A and Jonas U, Increased levels of human papillomavirus type 16 DNA in a subset of prostate cancers. Cancer Res. 1999 Feb. 15; 59(4): 823-5.  |   |
|                      | C22 | Simonart T, Boelaert J R, Andrei G, van den Oord J J, Degraef C, Hermans P, Noel J C, Van Vooren J P, Heenen M, De Clercq E and Snoeck R, Desferrioxamine enhances AIDS-associated Kaposi's sarcoma tumor development in a xenograft model. Int J Cancer 2002 Jul. 10;100(2):140-3. |   |
|                      | C23 | Simonart, et al., Antiproliferative and apoptotic effects of iron chelators on human cervical carcinoma cells. Gynecologic Oncology, 2002, Vol. 85, 94-102  |   |

**EXAMINER**

NYI-3994892v1

**DATE CONSIDERED**

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**LIST OF REFERENCES CITED BY APPLICANT**  
(Use several sheets if necessary)

ATTY. DOCKET NO.

9439-013-999

APPLICATION NO.

10/774,324

APPLICANT

Zeligs M.

FILING DATE

February 6, 2004

ART UNIT

1617

**NON PATENT LITERATURE DOCUMENTS**

| Examiner<br>Initials |     | (Include name of the author, title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, pages(s), volume-issue number(s), publisher, city and/or country where published)                 | T |
|----------------------|-----|--|---|
|                      | C24 | Terao Y, Nishida J, Horiuchi S, Rong F, Ueoka Y, Matsuda T, Kato H, Furugen Y, Yoshida K, Kato K and Wake N, Sodium butyrate induces growth arrest and senescence-like phenotypes in gynecologic cancer cells. Int J Cancer 2001 Oct. 15; 94(2): 257-67. |   |
|                      | C25 | Walboomers J M, Jacobs M V, Manos M M, Bosch F X, Kummer J A, Shah K V, Snijders P J, Peto J, Meijer C J and Munoz N, Human papillomavirus is a necessary cause of invasive cervical cancer worldwide. J Pathol. 1999 September; 189(1):12-9.            |   |
|                      | C26 | Zambrano A, Kalantari M, Simoneau A, Jensen J L, Villarreal L P, Detection of human polyomaviruses and papillomaviruses in prostatic tissue reveals the prostate as a habitat for multiple viral infections. Prostate. 2002 Dec. 1;53(4):263-76.         |   |

**EXAMINER**

NYI-3994892v1

**DATE CONSIDERED**

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.